

Applicant: Ikuya YAGISAWA, et al.

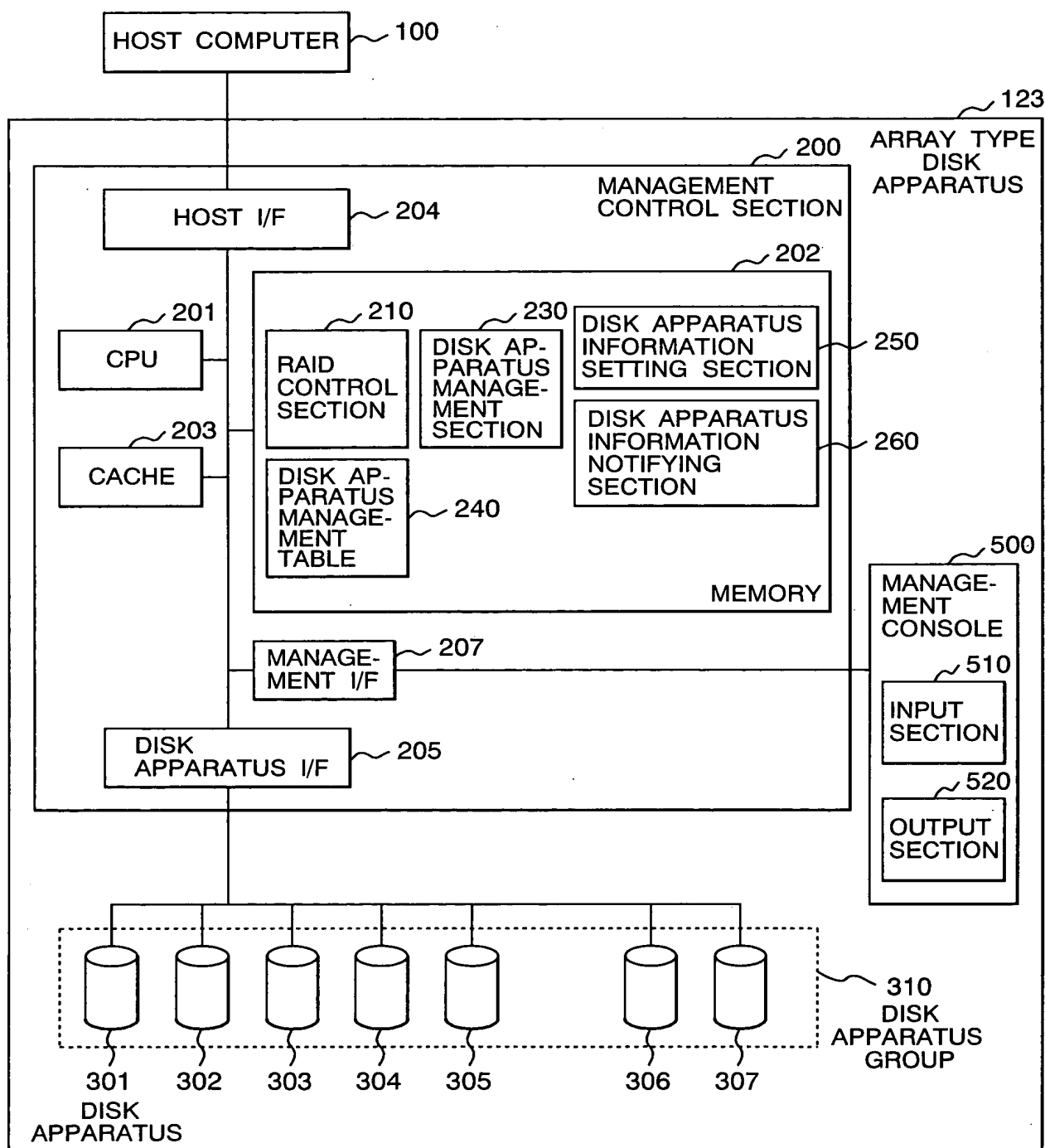
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty Docket No. 16869N-104800US

Sheet 1 of 17

1/17

FIG. 1



Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

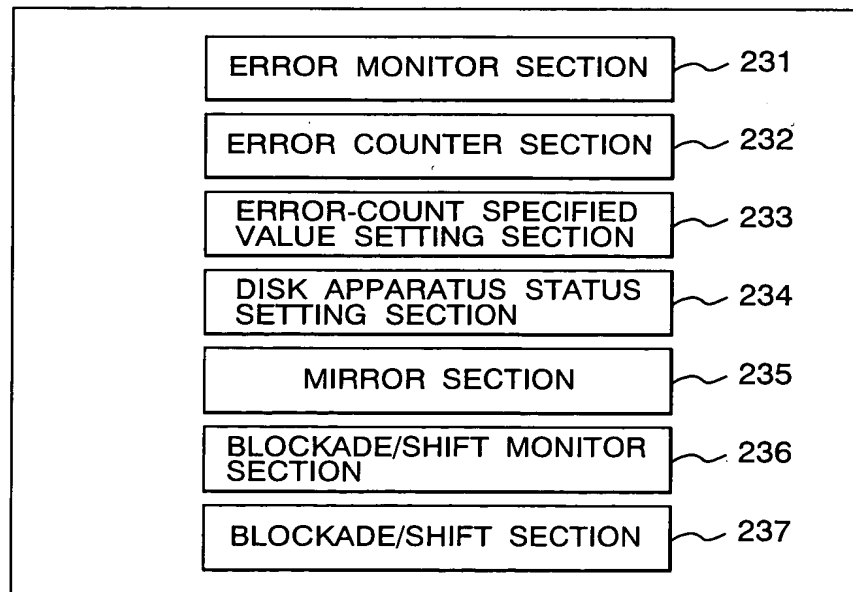
Atty D ck t No. 16869N-104800US

She t 2 of 17

2/17

**FIG. 2**

DISK APPA- RATUS NO.	ERROR COUNTER	ERROR COUNT SPECIFIED VALUE LEVEL 1	ERROR COUNT SPECIFIED VALUE LEVEL 2	SPARE BIT	DISK AP- PARATUS STATUS	PAIR DISK AP- PARATUS
0	5	5 0	9 0	No	NORMAL	—
1	5	5 0	9 0	No	NORMAL	—
2	5	5 0	9 0	No	NORMAL	—
3	5	5 0	9 0	No	NORMAL	—
4	6 0	5 0	9 0	No	MIRROR	No. 5
5	5	5 0	9 0	Yes	MIRROR	No. 4
6	5	5 0	9 0	Yes	NORMAL	—
...						

**FIG. 3**

Applicant: Ikuya YAGISAWA, et al.

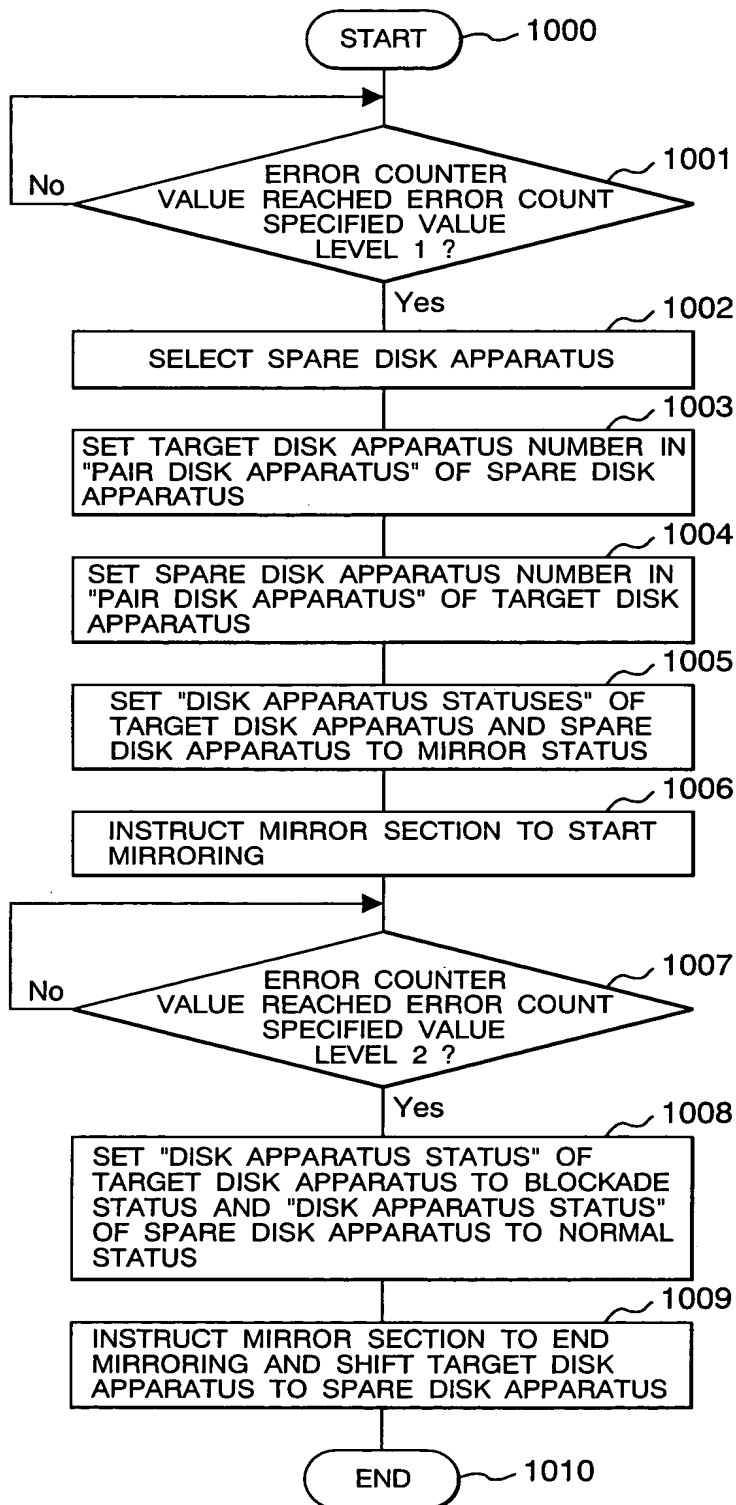
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty Docket No. 16869N-104800US

Sheet 3 of 17

3/17

FIG. 4



Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D cket No. 16869N-104800US

Sheet 4 f 17

4/17

**FIG. 5**

DISK APPA- RATUS NO.	ERROR COUNTER	ERROR COUNT SPECIFIED VALUE LEVEL 1	ERROR COUNT SPECIFIED VALUE LEVEL 2	SPARE BIT	DISK AP- PARATUS STATUS	PAIR DISK AP- PARATUS
0	1 0	3 0	9 0	No	NORMAL	—
1	5	3 0	9 0	No	NORMAL	—
2	3 5	3 0	9 0	No	MIRROR	No. 6
3	5	3 0	9 0	No	NORMAL	—
4	2 0	3 0	9 0	No	MIRROR	No. 5
5	5	3 0	9 0	Yes	MIRROR	No. 4
6	5	3 0	9 0	Yes	MIRROR	No. 2
...						

Applicant: Ikuya YAGISAWA, et al.

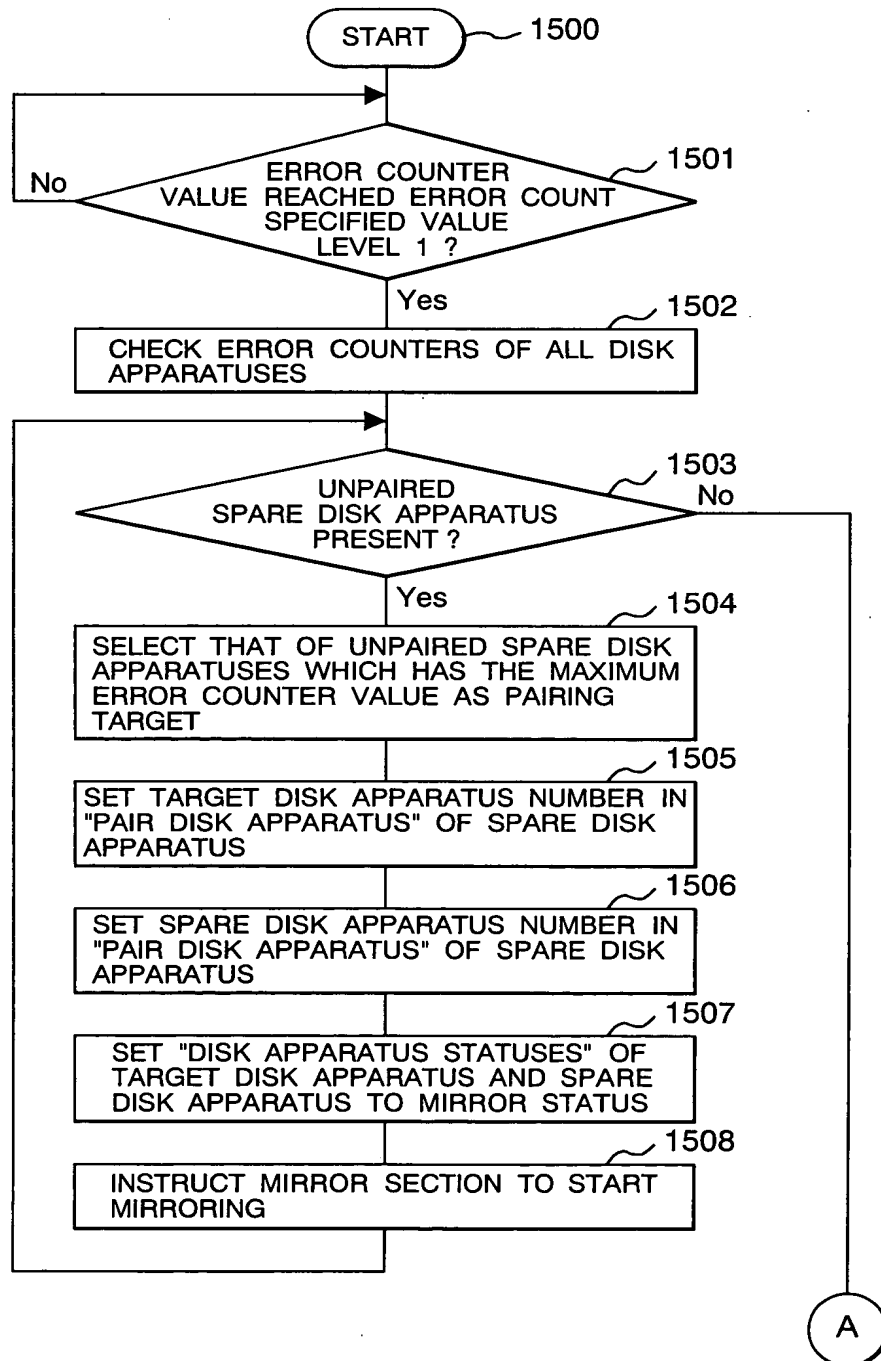
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D cket N . 16869N-104800US

Sheet 5 of 17

5/17

FIG. 6-1



Applicant: Ikuya YAGISAWA, et al.

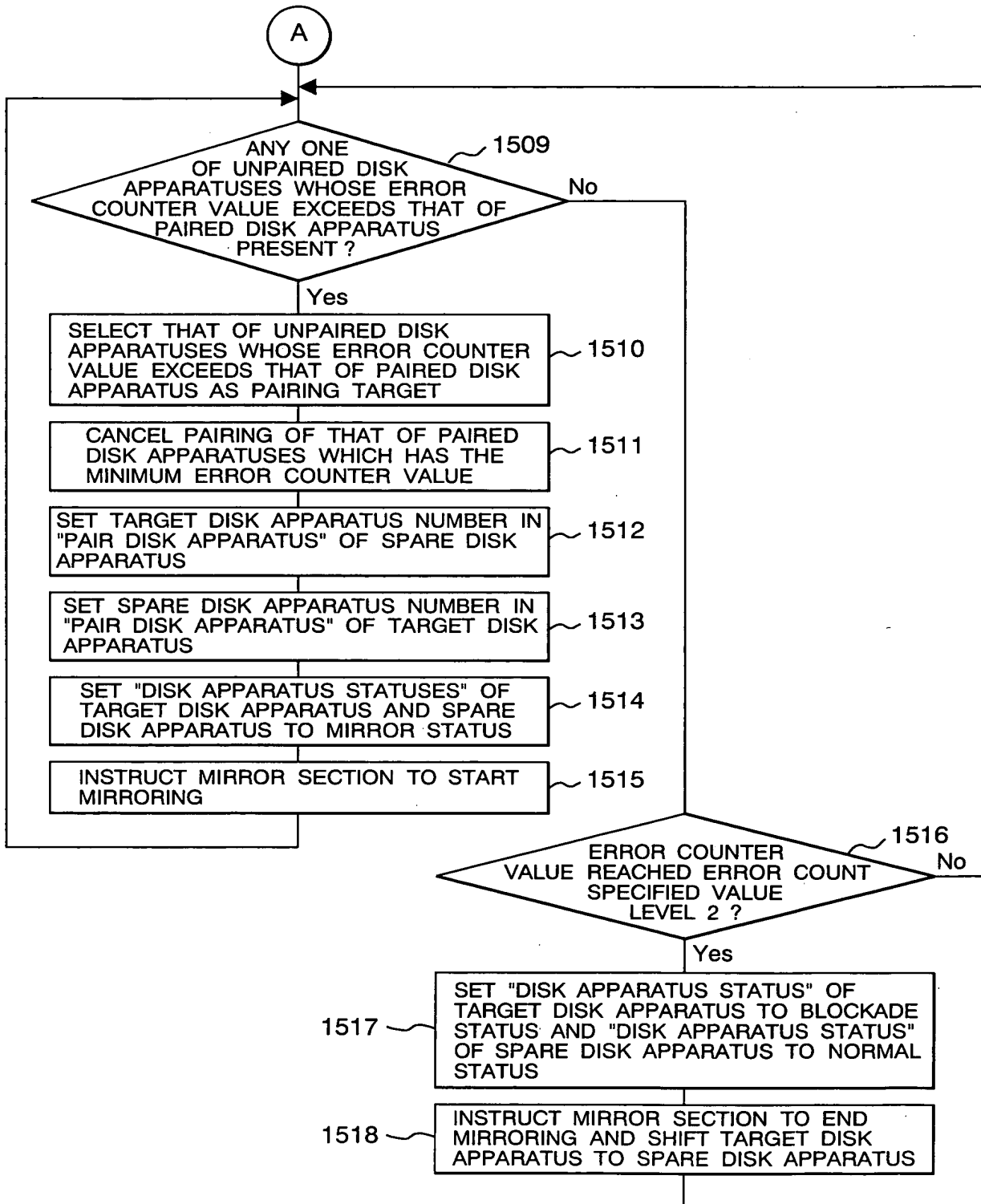
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D ck t N . 16869N-104800US

Sh t 6 f 17

6/17

FIG. 6-2



Applicant: Ikuya YAGISAWA, et al.

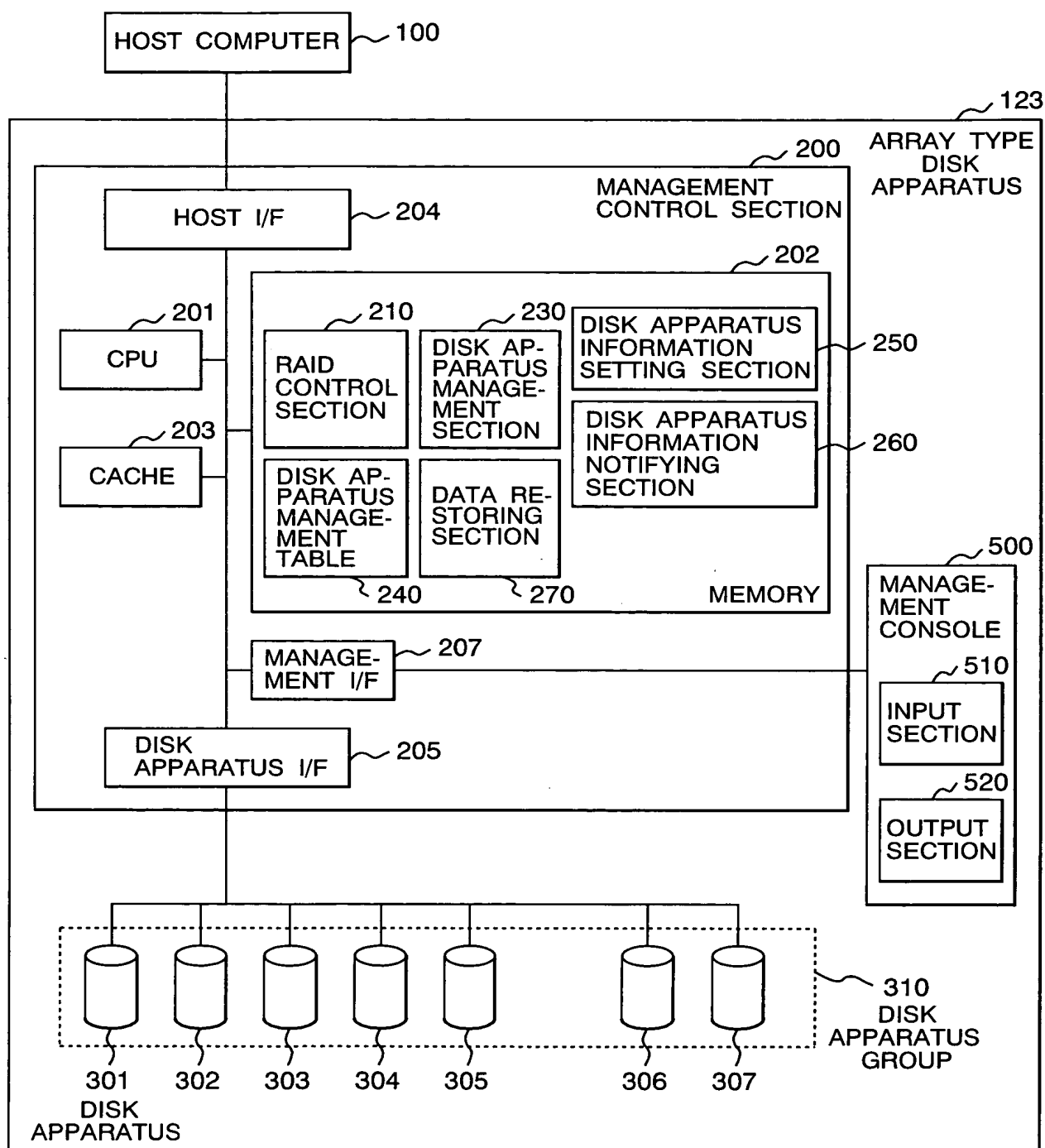
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty Docket N . 16869N-104800US

Sh et 7 of 17

7/17

FIG. 7



Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

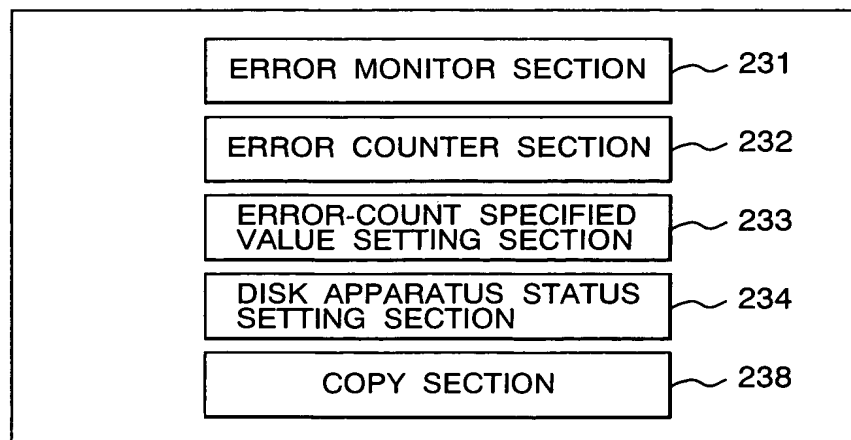
Atty D cket No. 16869N-104800US

Sheet 8 of 17

8/17

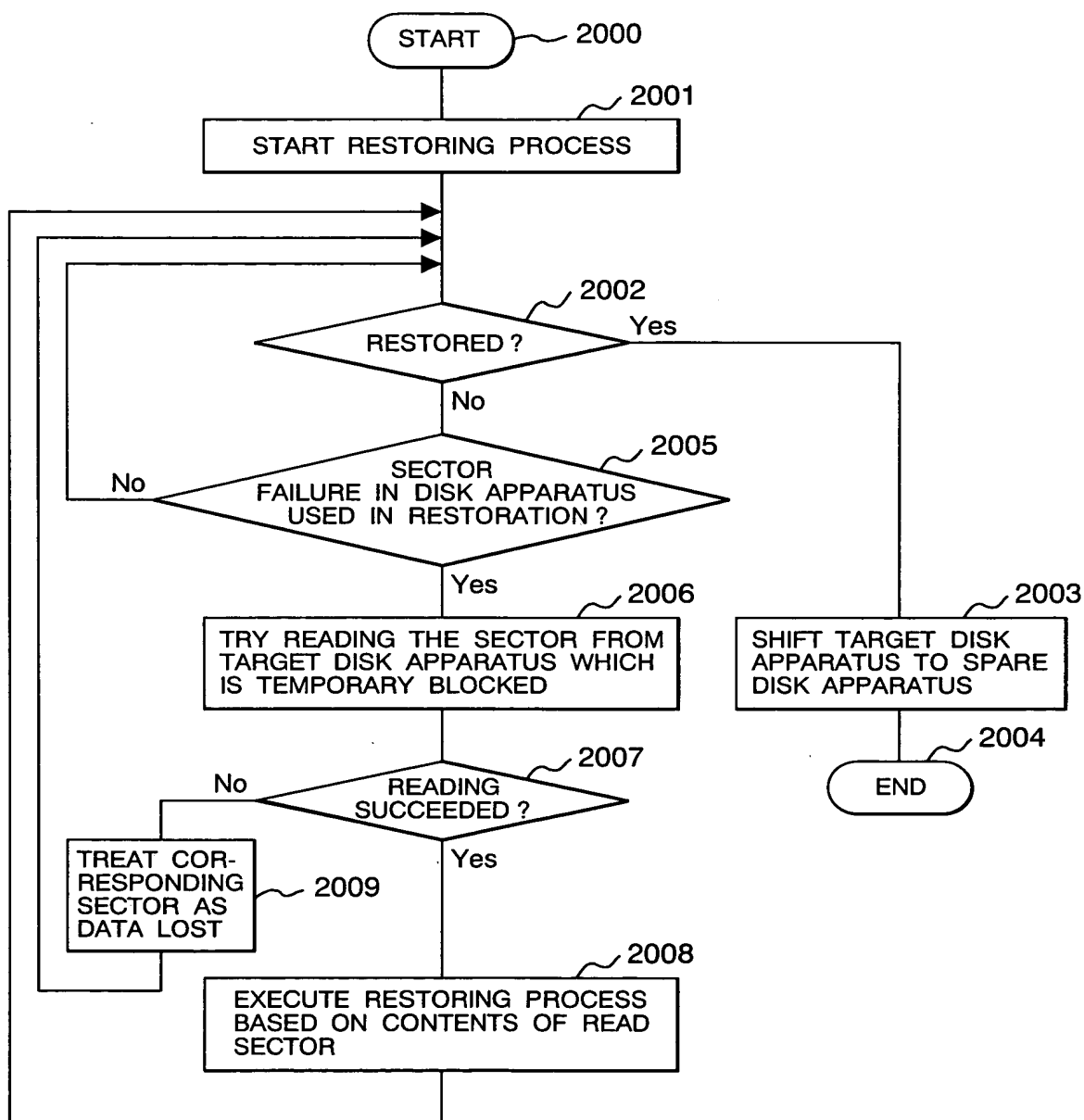
**FIG. 8**

DISK APPA- RATUS NO.	ERROR COUNTER	ERROR COUNT SPECIFIED VALUE LEVEL 1	SPARE BIT	DISK AP- PARATUS STATUS	PAIR DISK AP- PARATUS
0	5	8 0	No	RESTORING	—
1	5	8 0	No	RESTORING	—
2	5	8 0	No	RESTORING	—
3	5	8 0	No	RESTORING	—
4	8 5	8 0	No	TEMPORARY BLOCKADE	No. 5
5	5	8 0	Yes	RESTORING	No. 4
6	5	8 0	Yes	NORMAL	—
...					

**FIG. 9**



9/17

**FIG. 10**

Applicant: Ikuya YAGISAWA, et al.

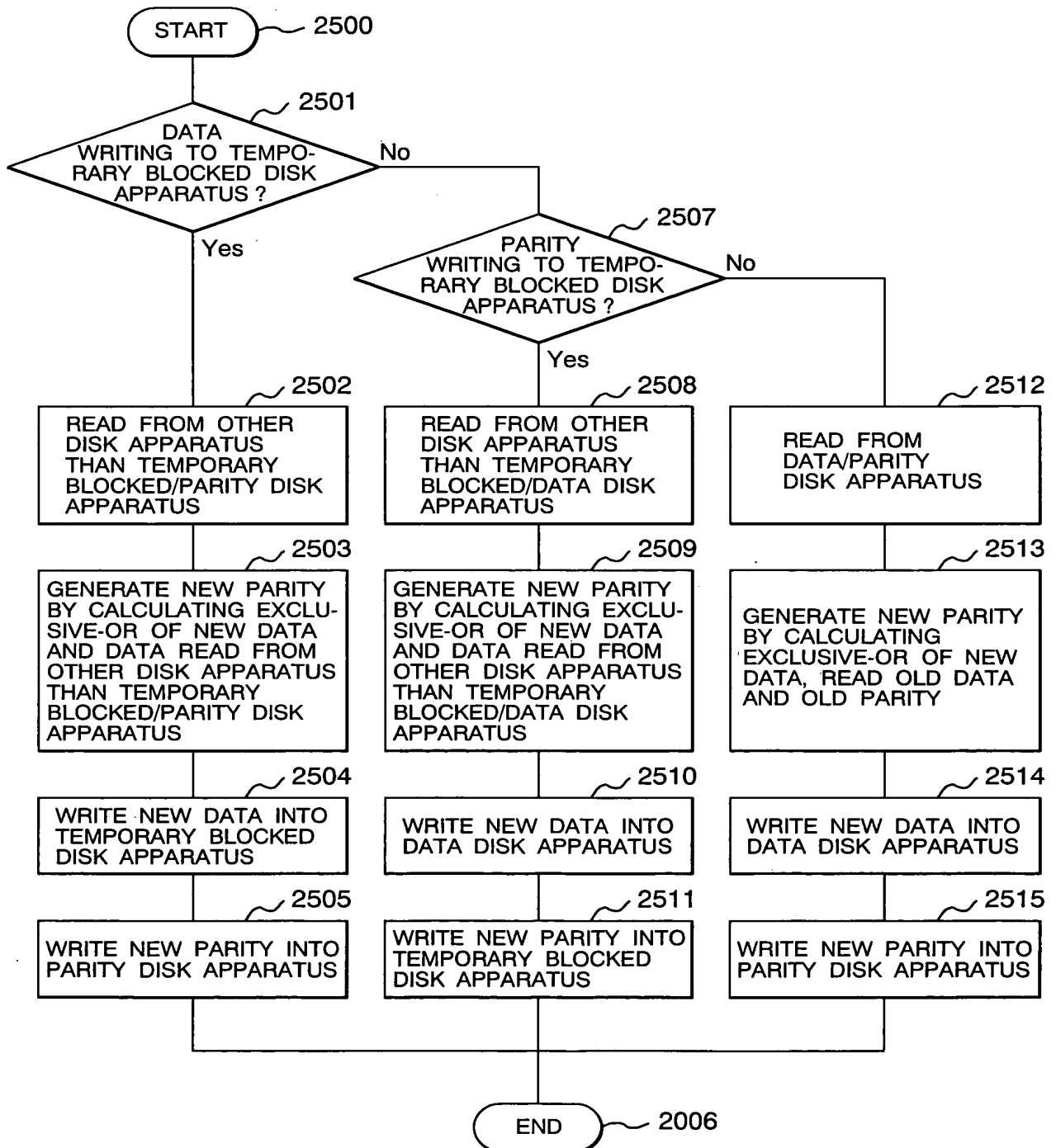
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D cket No. 16869N-104800US

She t 10 f 17

10/17

FIG. 11



Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

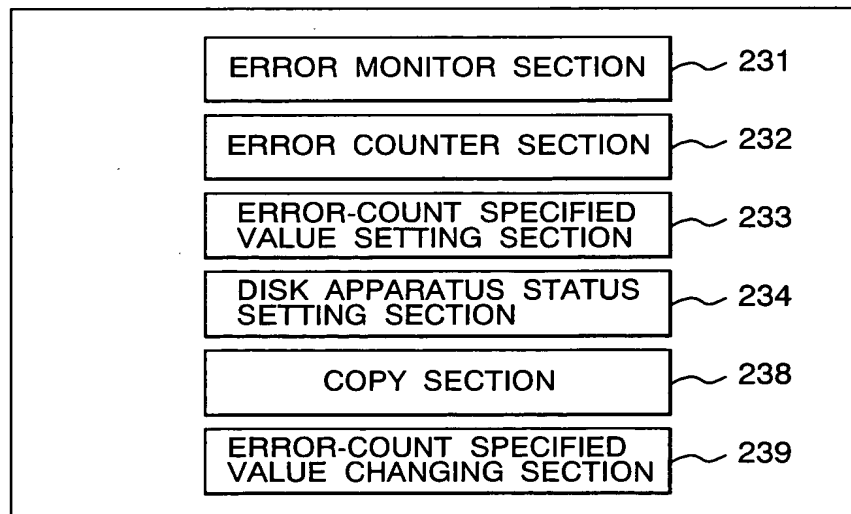
Atty Dock t No. 16869N-104800US

Sheet 11 of 17

11/17

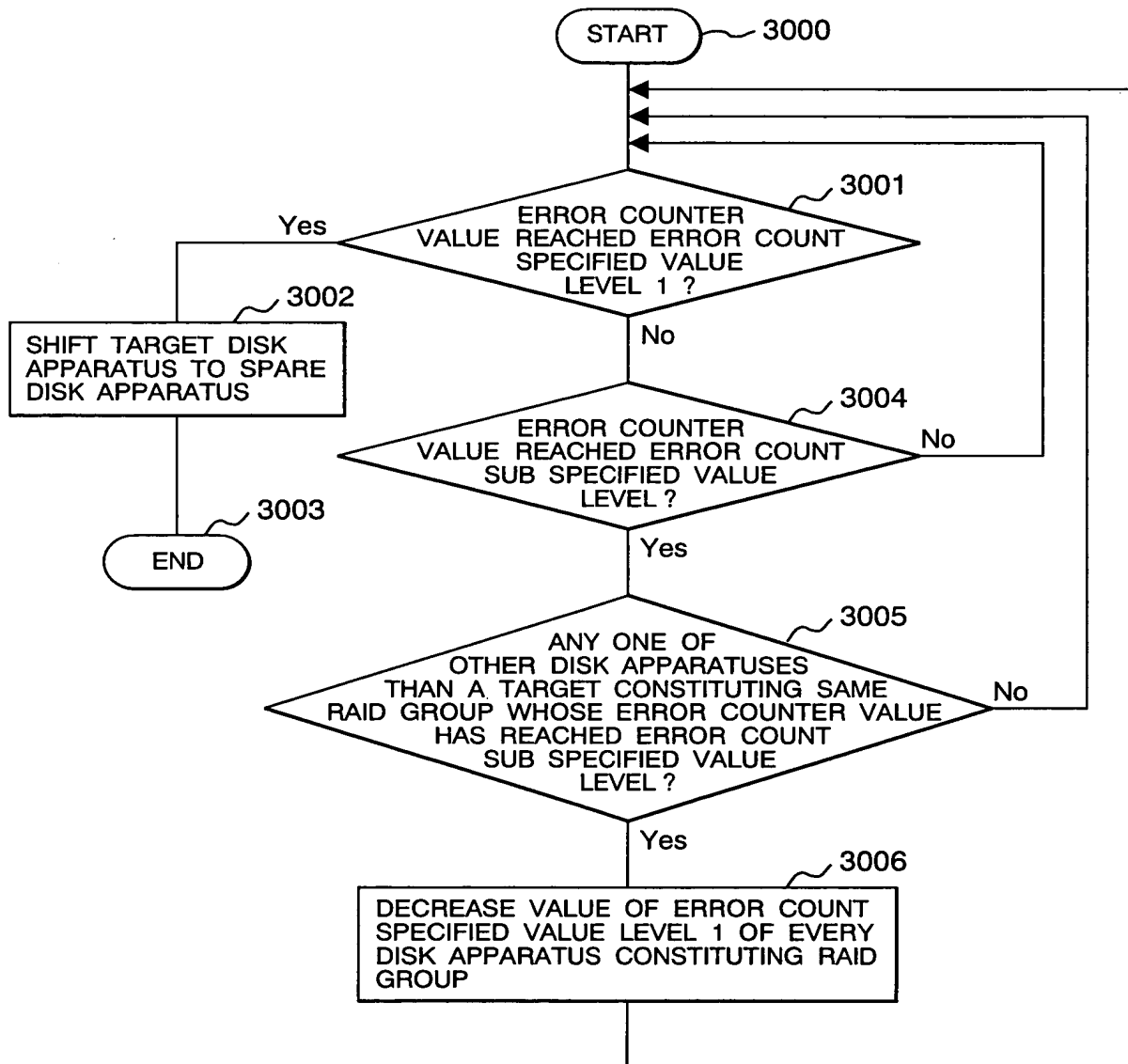
**FIG. 12**

DISK APPA- RATUS NO.	ERROR COUNTER	ERROR COUNT SPECIFIED VALUE LEVEL 1	ERROR COUNT SUB SPECIFIED VALUE	SPARE BIT	DISK AP- PARATUS STATUS	PAIR DISK AP- PARATUS
0	5	6 0	4 0	No	NORMAL	—
1	4 0	6 0	4 0	No	NORMAL	—
2	5	6 0	4 0	No	NORMAL	—
3	4 0	6 0	4 0	No	NORMAL	—
4	5	6 0	4 0	No	NORMAL	—
5	5	8 0	4 0	Yes	NORMAL	—
6	5	8 0	4 0	Yes	NORMAL	—
...						

**FIG. 13**

12/17

FIG. 14



Applicant: Ikuya YAGISAWA, et al.

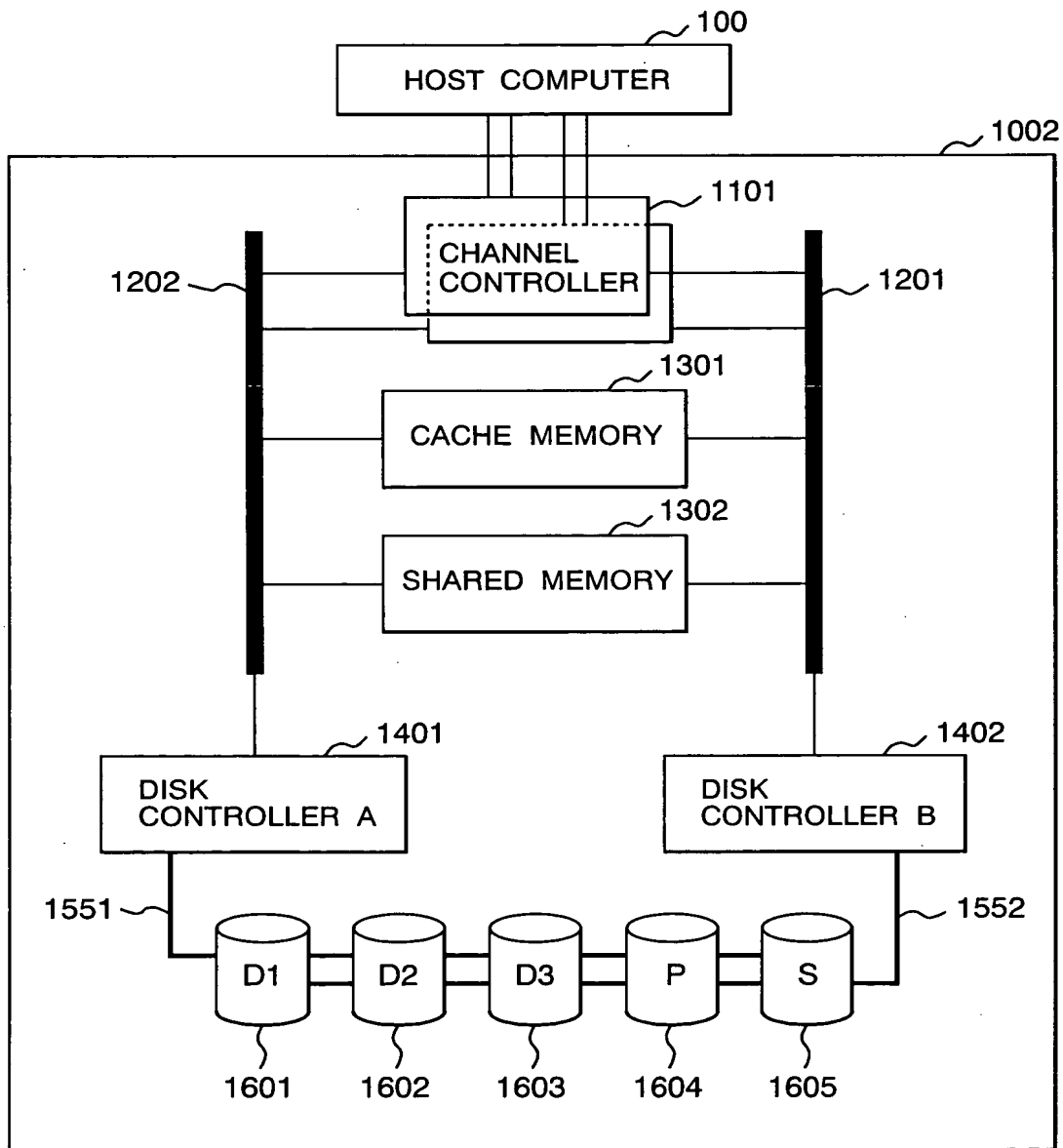
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty Docket No. 16869N-104800US

Sheet 13 of 17

13/17

FIG. 15



Applicant: Ikuya YAGISAWA, et al.

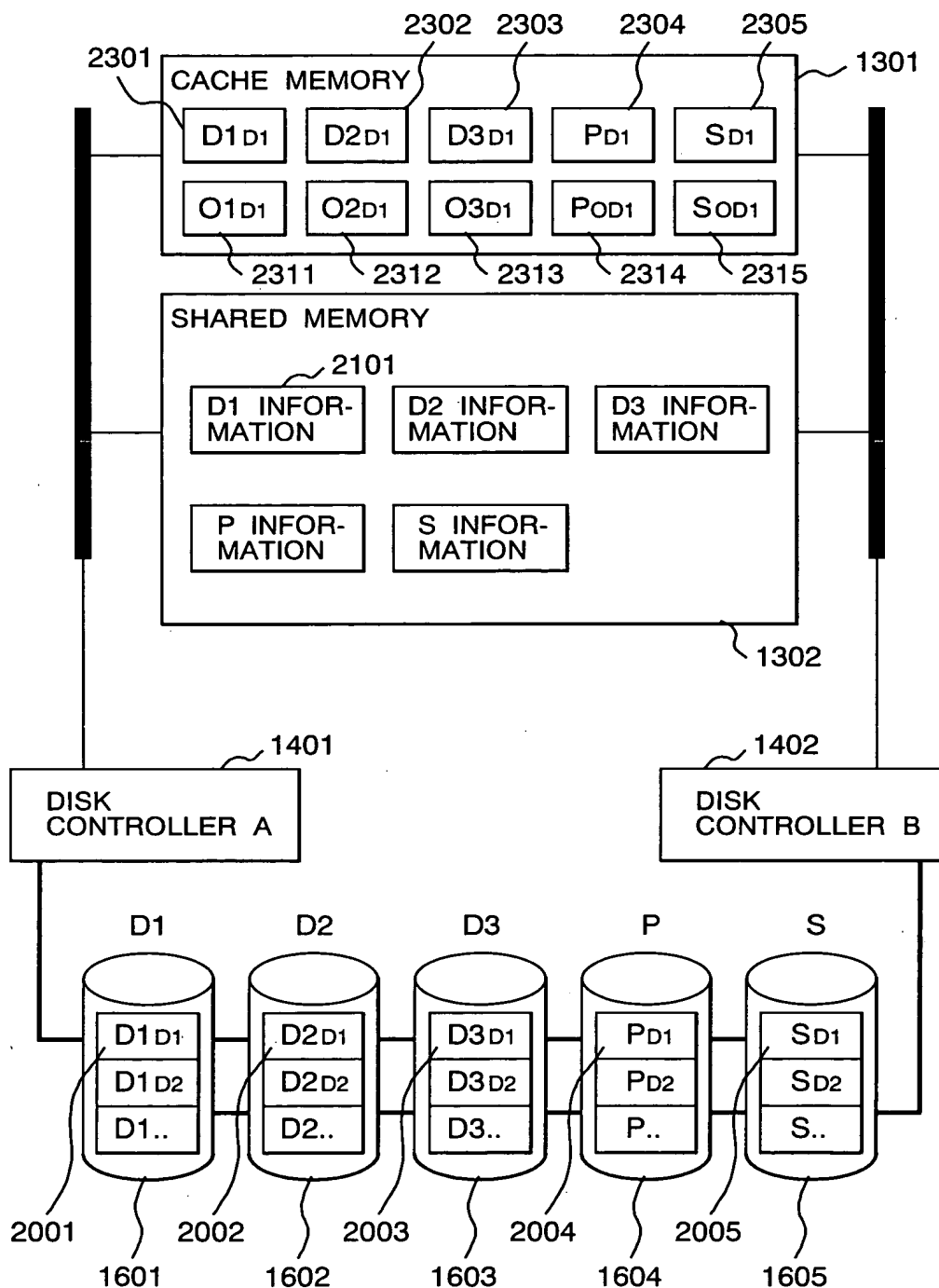
Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D ck t N . 16869N-104800US

Sheet 14 of 17

14/17

FIG. 16



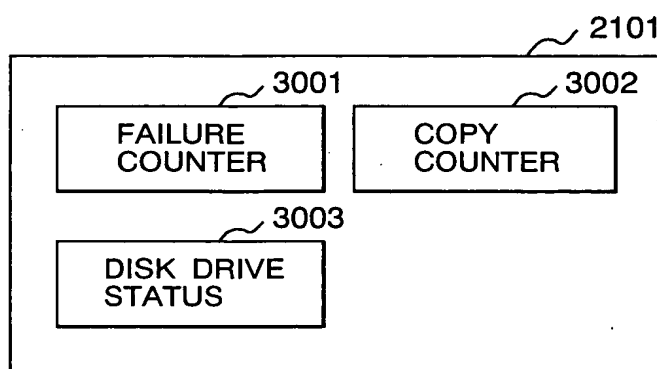
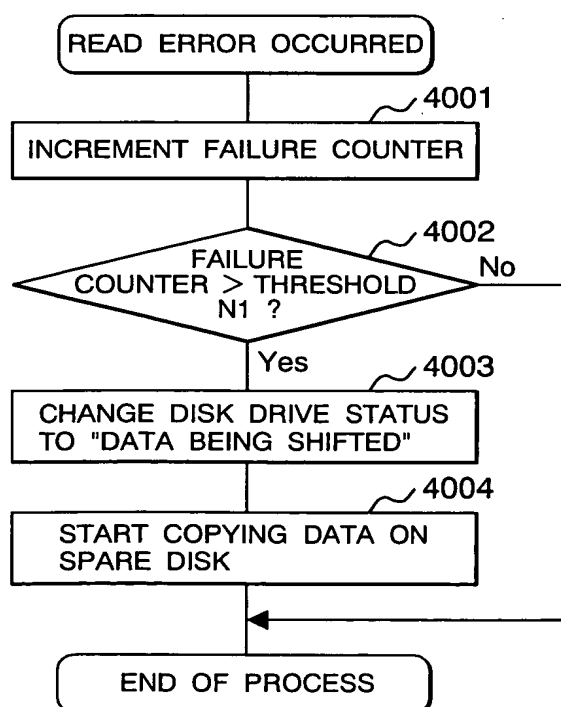
Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D cket No. 16869N-104800US

Sh et 15 of 17

15/17

**FIG. 17****FIG. 18**

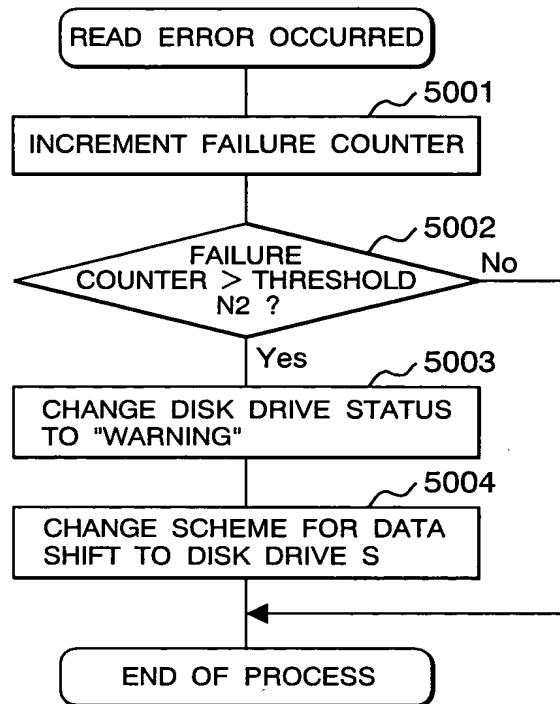
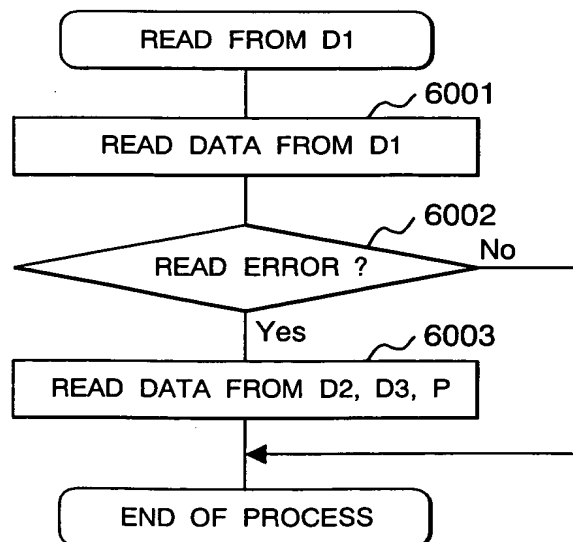
Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

Atty D cket N . 16869N-104800US

Sh t 16 f 17

16/17

**FIG. 19****FIG. 20**



Applicant: Ikuya YAGISAWA, et al.

Title: Array-Type Disk Apparatus Preventing Data Lost...

Attorney No. 16869N-104800US

Sheet 17 of 17

17/17

FIG. 21

